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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,700	03/27/2001	William F. Avrin	1502-088CON	3629

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THE MAXHAM FIRM
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EXAMINER

MANTIS MERCADER, ELENI M

ART UNIT	PAPER NUMBER
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3737

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,700

Applicant(s)

AVRIN ET AL.

Examiner

Eleni Mantis Mercader

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-118 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-35, 58-69 and 95-99 is/are allowed.
- 6) ☒ Claim(s) 36-57, 70-94 and 100-118 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on 09/07/2004 have been fully considered but they are not persuasive. The patentable limitations regarding the constant volume in the flexible bag has not been added in claims 36-57, 70-94, and 100-118. The rejection is therefore maintained with respect to these claims.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 36-57, 70-94, and 100-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paulson et al.'217 in view of Ohyu'031.

Paulson et al.'217 teach an apparatus for non-invasively measuring magnetic susceptibility variations in the body tissue of a patient to determine a compositional state in the body, the apparatus comprising:

a detector assembly that includes at least one magnetic sensor and an applied field coil for generating a magnetic field (see col. 5, lines 38-44 and col. 8, lines 9-33);

means for processing signals from said at least one magnetic sensor of observed magnetic susceptibility variations in body tissue and means for outputting data from said detector assembly corresponding to a compositional state in the body (col. 5, lines 49-67);

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a non-conductive, non-magnetic, substantially rigid barrier (referring to barriers 58 and 60; see col. 7, lines 32-41);.

a flexible membrane below said barrier to form a container therewith, there being a deformable material within and occupying most of the volume within said container, said material having a magnetic susceptibility substantially equivalent to that of the body tissue, said container also being deformable to fill in substantially all gaps between said barrier and the patient's body (See Figure 1, wherein the waterbag 22 is between the susceptibility measuring apparatus 12 and the patient 18 and also see col. 6, lines 15-22).

Paulson et al.'217 do not expressly teach the bag being sealed to the barrier, but even if not sealed the same end effect results which is ability to measure the susceptibility of tissue of interest thereby making the connection one of functional equivalency.

Paulson et al.'217 do not expressly teach wherein the use of the applied field coil comprises at least two concentric circular spiral coils.

In the same field of endeavor, Ohyu'031 teaches in a SQUID the applied field coil comprises at least two concentric circular spiral coils (see Figure 7 which indicate three concentric circular spiral coils).

It would have been obvious to one skilled in the art at the time that the invention was made to have modified Paulson et al.'217 and incorporated the teachings of Ohyu'031 in order to use the pickup coils in the magnetometer sensor of Paulson et al.'217 as they improve the sensitivity in a depth direction and improve the overall signal-to-noise ratio (see in Ohyu'031, col. 2, lines 40-46; referring to the motivation to combine).

Conclusion

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni Mantis Mercader whose telephone number is (571) 272-4740. The examiner can normally be reached on Mon. - Fri., 8:00 a.m.-6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eleni Mantis Mercader
Primary Examiner
Art Unit 3737

EMM